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EXAMINER

SNYDER, DAVID A

ART UNIT

PAPER NUMBER

2122

DATE MAILED: 07/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/394,023

Applicant(s)

ALANIS, BELISARIO DAVILA

Examiner

David A Snyder

Art Unit

2122

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 21 April 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1,4-8 and 10-15 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,4-8 and 10-15 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 Feb 2003 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 4 – 8, and 10 – 15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 4, 8, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claim 1, “hardware simulated single or dual two-dimensional array means” is not described in the specification. There is not sufficient description in the

specification show one of ordinary skill in the art the means to *simulate*, by means of hardware, a single or dual two-dimensional array.

As per claim 4, “software simulated central processing means” and “software emulated local memory means” are not described in the specification. There is not sufficient description in the specification to show one of ordinary skill in the art the means to *simulate* or *emulate* a central processing means or a local memory means by means of software.

As per claim 8, “software emulated processor means” and “temporary implemented software first and second two-dimensional buffer array” are not described in the specification. There is not sufficient description in the specification to show one of ordinary skill in the art the means to *emulate* a processor means by means of software nor is there sufficient description for a software first or second two-dimensional buffer array implemented by temporary.

As per claim 12, “software emulated temporary storage media” is not described in the specification. There is not sufficient description in the specification to show one of ordinary skill in the art the means to *emulate* storage media, whether temporary or permanent, by means of software.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(a & e) as being anticipated by Rao (USPN 5,930,358).

As per claim 1, Rao teaches, "providing SCSI firmware for a disk drive and servo SCSI firmware for positioning said disk drive" (Rao, col. 2, ll. 8 – 10, and col. 4, ll. 44 – 54);

Rao also discloses, "a central processing unit a selection means for choosing hardware simulated single or dual two-dimensional array means for temporary storing said SCSI firmware prior to placement onto a target peripheral controller" (Rao, col. 6, ll. 10 – 15);

Rao also teaches, "means for temporarily storing a different version of said firmware until said target controller has been accessed to identify the proper version of firmware required" (Rao, col. 7, ll. 33 – 41);

Rao also discloses, "checking the pre-existing firmware . . . to determine whether an updated firmware version will be required" (Rao, col. 2, ll. 4 – 6).

As per claim 4, Rao teaches, “a source software means for said firmware and SCSI servo firmware” (Rao, col. 2, ll. 8 – 10);

Rao also discloses, “central processing means for receiving said firmware from said source software means and utilizing . . . local memory” (Rao, col. 4, ll. 15 – 21);

Rao also teaches, “connection means from said . . . local memory means over to a selected one of a plurality of disk drives” (Rao, col. 4, ll. 41 – 44);

Rao also discloses, “means for loading said SCSI firmware into a first flash PROM and for loading said servo SCSI firmware into a second servo flash PROM” (Rao, col. 5, ll. 62 – 64);

Rao also discloses, “means to Write said firmware from said first and second flash PROMs onto a targeted peripheral controller for a disk unit” (Rao, col. 5, line 66, to col. 6, line 2).

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8 and 10 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao.

As per claim 8, Rao teaches, “software source means for providing microcode firmware for a target controller” (Rao, col. 4, ll. 29 – 34);

Rao also discloses, "means for transferring said SCSI firmware and server firmware onto a targeted peripheral controller for a disk unit" (Rao, col. 6, ll. 50 – 55);

Rao also teaches, "interface . . . for issuing a download command request and an inquiry command to query the said target controller (Rao, Fig. 3, items 308 and 312);

Rao also discloses, "means to access the appropriate firmware release numbers and serve release number to enable a selection of the appropriately proper firmware" (Rao, col. 7, ll. 30 – 41);

The Examiner takes Official Notice that it is old and well-known in the art that a processor has the means to allocate memory, in either a first and/or second two-dimensional buffer array. Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that a buffer would be necessary for the temporary storage of a target controller's downloaded upgrade firmware. One of ordinary skill in the art would have been motivated to do this in order to assemble the firmware upgrade as it was being assembled and in order to interrogate it before installation.

As per claim 10, as applied to claim 8 above, Rao teaches, "means to check and compare the pre-existing firmware in said target controller to determine whether new updated firmware is required" (Rao, col. 7, ll. 30 – 41).

As per claim 11, as applied to claim 8 above, Rao teaches, "means for checking to indicate that the proper firmware has been downloaded to the proper target controller module" (Rao, Fig. 3, item 312).

As per claim 12, Rao teaches, "providing a plurality of separate . . . storage media for holding different versions of SCSI firmware appropriate for different types of target control modules (Rao, col. 5, ll. 62 – 64, and col. col. 7, ll. 30 – 41);

Rao also teaches, "utilizing a . . . utility program for initiating a firmware download to a target control module" and "downloading the selected firmware by said utility onto said target control module" (Rao, col. 6, ll. 50 – 55, and col. 7, ll. 18 – 20);

The Examiner takes Official Notice that it is old and well-known in the art that a processor has the means to allocate memory, in either a first and/or second two-dimensional buffer array. Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that a buffer would be necessary for the temporary storage of a target controller's downloaded upgrade firmware. One of ordinary skill in the art would have been motivated to do this in order to assemble the firmware upgrade as it was being assembled and in order to interrogate the upgrade before installation.

As per claim 14, as applied to claim 12 above, Rao discloses, "checking the pre-existing firmware in said target controller" and means "to determine whether or not said pre-existing firmware requires any updating from the selected firmware on the selected storage media" (Rao, col. 7, ll. 12 – 17).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao in view of Kohno et al. (USPN 6,523,125; hereafter referred to as Kohno).

As per claim 5, as applied to claim 4 above, Rao does disclose "a modem (not illustrated) connected to a phone line 114 which is used for downloading new microcode

used to control disk drive assembly" (Rao, col. 4, ll. 29 – 32). However, Roa does not expressly disclose that the downloaded microcode is downloaded from the "World Wide Web". However, Kohno does disclose that the downloading of new microcode or firmware can be made from the "WWW (World Wide Web)" (Kohno, col. 15, ll. 30 – 34). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the modem of Roa could be connected to the World Wide Web of Kohno (Kohno, col. 15, ll. 29 – 30). One of ordinary skill in the art would have been motivated to do this in order to download "new microcode" (Rao, col. 4, ll. 29 – 32) and "updated ROM code, for example, may be downloaded from a Web server on the Internet" (Kohno, col. 15, ll. 34 – 36).

10. Claims 7, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao in view of the American National Standards Institute's (ANSI) SCSI-2 standard, X3.131-1994 (hereafter referred to as the ANSI X3.131-1994 standard).

As per claim 7, Rao discloses, "software means to determine, from said identification information, what version of firmware will be downloaded to said target controller" (Rao, col. 6, ll. 50 – 55, and col. 7, ll. 30 – 41);

Rao does not expressly disclose, "software inquiry means to said target controller to acquire identification information." However, the ANSI X3.131-1994 standard does disclose the means to query a target controller (ANSI X3.131-1994 standard, clause 8, section 2.5). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that software INQUIRY command of the ANSI X3.131-1994 standard would be used for the interrogation of the target controller of Rao. One of

ordinary skill in the art would have been motivated to do this in order to obtain “configuration data (e.g. vendor identification, product identification, model, serial number), manufacturing data (e.g. plant and date of manufacture), field replaceable unit data and other vendor- or device-specific data” (ANSI X3.131-1994 standard, clause 8, section 8.2.5.2).

As per claim 14, Rao discloses, “downloading said SCSI firmware data” and “passing said SCSI firmware data onto said target control module” (Rao, Fig. 3, item 308);

Rao does not expressly disclose, “initiating a SCSI Inquiry Command to said target control module via a Command Descriptor Block.” However, the ANSI X3.131-1994 standard discloses the means to query a target controller (ANSI X3.131-1994 standard, clause 8, section 2.5). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the INQUIRY command of the ANSI X3.131-1994 standard in order to ascertain identification and version information about a targeted controller of Rao. One of ordinary skill in the art would have been motivated to do this in order that, “[t]he INQUIRY command may be used by a system to determine the configuration of the SCSI bus. Target devices respond with information that includes their type and standard level and may include the vendor's identification, model number and other useful information” (ANSI X3.131-1994 standard, clause 8, section 8.1.2.1);

Rao also does not expressly teach, “means to query a designated target control module with information from a Page Code Field.” However, the ANSI X3.131-1994

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standard does specify that the query command of the SCSI standard use information from a Page Code Field (ANSI X3.131-1994 standard, clause 8, section 8.2.5). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the querying of a target controller of Rao should be made via the INQUIRY command, with information inserted from a Page Control Field, of the ANSI X3.131-1994 standard. One of ordinary skill in the art would have been motivated to do this in order to that “the target shall return the optional vital product data” (ANSI X3.131-1994 standard, clause 8, section 8.2.5).

The Examiner takes Official Notice that it is old and well-known in the art that a software program, by means of a processor, has the means to allocate memory by means of a two-dimensional buffer array. Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that a memory buffer array would be necessary for the transfer of a target controller’s downloaded upgrade firmware. One of ordinary skill in the art would have been motivated to do this in order to move a firmware upgrade to a target control module.

As per claim 15, as applied to claim 14 above, Rao does not expressly disclose, “means to sense when said SCSI Inquiry Command initiates illegal request.” However, the ANSI X3.131-1994 standard does include the means to sense an illegal INQUIRY command request (ANSI X3.131-1994 standard, clause 8, section 8.2.5). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the SCSI INQUIRY command of the ANSI X3.131-1994 standard would “sense” the illegal request of the upgrading of the target controller of Rao. One of

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ordinary skill in the art would have been motivated to do this in order “[i]f the target does not support vital product data” (ANSI X3.131-1994, clause 8, section 8.2.5).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao and Kuhno and further in view of Lippert et al. (USPN 6,356,906; hereafter referred to as Lippert).

As per claim 6, as applied to claim 4 above, Rao discloses implicitly that the CPU has, “means for selecting a . . . buffer array which most closely approximates said recognized number of bytes to be downloaded” (Rao, col. 4, ll. 29 – 32);

Both Rao and Kuhno teach connecting via a modem and wide-area network (WAN) to a distant website on the World Wide Web (WWW). However, neither Rao nor Kuhno expressly disclose the means of connecting to a distant WWW website, “recognizing the number of bytes of firmware to be downloaded,” and downloading from the website. As the Microsoft Computer Dictionary defines the World Wide Web, “The total set of interlined hypertext documents residing on HTTP servers all around the world” (Microsoft Computer Dictionary, pg. 574), and the HTTP/1.1 headers of Lippert teaches means to recognize “the number of bytes of firmware to be downloaded” (Lippert, col. 7, ll. 6 – 9). Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that WWW connections of Rao and Kuhno would employ the HTTP headers of Lippert. One of ordinary skill in the art would have been motivated to do this in order to “indicate anything required by that protocol, such as its version, a host location, content type, connection type, and content-length” (Lippert, col. 6, ll. 53 – 58).

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Snyder whose telephone number is (703) 305-7205. The examiner can normally be reached on Monday - Friday from 9am - 5pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q Dam can be reached on (703) 305-4552. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

dAs  
July 9, 2003

  
**TUAN Q. DAM**  
**PRIMARY EXAMINER**